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IEEE JNL IEEE Journal or Magazine

IEEE JNL IEEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEEE CNF IEEE Conference Proceeding

IEEE STD IEEE Standard

1. Gesture-speech based HMI for a rehabilitation robot

Shoupu Chen; Kazi, Z.; Beitler, M.; Salganicoff, M.; Chester, D.; Foulds, R. Southeastcon '96. 'Bringing Together Education, Science and Technology', Proceedings of the 11-14 Apr 1996

Page(s): 29-36

Summary: One of the most challenging problems in rehabilitation robotics is the design of an e machine interface (HMI) allowing the user with a disability considerable freedom and flexibility. user direction approach combining comma.....[AbstractPlus](#) | Full Text: [PDF](#) IEEE CNF

2. Toward multimodal human-computer interface

Sharma, R.; Pavlovic, V.I.; Huang, T.S. Proceedings of the IEEE

Volume: 86 Issue: 5 May 1998

Page(s): 853-869

Summary: Recent advances in various signal processing technologies, coupled with an explos available computing power, have given rise to a number of novel human-computer interaction (speech, vision-based gesture recognition, eye tra.....[AbstractPlus](#) | [References](#) | Full Text: [PDF](#) IEEE JNLView: 1-2 | [View Search Resi](#)[Help](#) [Contact Us](#) [Privacy & S](#)

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IEEE JNL IEEE Journal or Magazine

IEEE JNL IEEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEEE CNF IEEE Conference Proceeding

IEEE STD IEEE Standard

1. Multimodal interfaces with voice and gesture input

Milota, A.D.; Blattner, M.M.

Systems, Man and Cybernetics, 1995. 'Intelligent Systems for the 21st Century', IEEE International

Volume: 3 22-25 Oct 1995

Page(s): 2760-2765 vol.3

Summary: The modalities of speech and gesture have different strengths and weaknesses, but create a synergy where each modality corrects the weaknesses of the other. The authors believe a multimodal system such as one intertwining speech and gesture.[AbstractPlus](#) | Full Text: [PDF](#) IEEE CNF**2. Word learning in a multimodal environment**

Roy, D.; Pentland, A.

Acoustics, Speech, and Signal Processing, 1998. ICASSP '98. Proceedings of the 1998 IEEE International Conference on

Volume: 6 12-15 May 1998

Page(s): 3761-3764 vol.6

Summary: We are creating human machine interfaces which let people communicate with machines using natural modalities including speech and gesture. A problem with current multimodal interfaces is that they are forced to learn the set of words and gestures which are used.[AbstractPlus](#) | Full Text: [PDF](#) IEEE CNF**3. Current trends in multimodal input recognition**

Salem, B.; Yates, R.; Saatchi, R.

IEEE Colloquium on Virtual Reality Personal Mobile and Practical Applications - 98/454
28 Oct 1998

Page(s): 3/1-3/6

Summary: In order to optimise the effectiveness of a personal virtual reality (VR) system, it is necessary to find a natural and efficient way of interacting with it. This can be achieved by incorporation of a direct user interface. To communicate with a virtual environment, the user must be able to interact with it in a natural way.[AbstractPlus](#) | Full Text: [PDF](#) IEEE CNF**4. Toward multimodal interpretation in a natural speech/gesture interface**

Kettebekov, S.; Sharma, R.

Information Intelligence and Systems, 1999. Proceedings. 1999 International Conference on
1999

Page(s): 328-335

Summary: Hand gestures and speech comprise the most important modalities of human to human communication. Motivated by this, there has been a considerable interest in incorporating these modalities for human computer interaction (HCI) part.[AbstractPlus](#) | Full Text: [PDF](#) IEEE CNF**5. Improving continuous gesture recognition with spoken prosody**

Kettebekov, S.; Yeasin, M.; Sharma, R.

Computer Vision and Pattern Recognition, 2003. Proceedings. 2003 IEEE Computer Society Conference on

Volume: 1 18-20 June 2003

Page(s): I-565- I-570 vol.1

Summary: Despite recent advances in gesture recognition, reliance on the visual signal alone unrestricted continuous gesticulation is inherently error-prone. Since spontaneous gesticulation coverbal in nature, there have been some attem.....

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<input type="checkbox"/>	L6	L4 and (finite adj state) and lattice	9
<input type="checkbox"/>	L5	L4 and (finite adj state)	32
<input type="checkbox"/>	L4	(speech and gesture) and recognition and multimod\$3	138
<input type="checkbox"/>	L3	L2 and gesture	9
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<input type="checkbox"/>	L2	L1 and multimod\$3	20
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END OF SEARCH HISTORY

Search Results - Record(s) 1 through 19 of 19 returned.

L7: Entry 1 of 19

File: PGPB

Apr 3, 2003

PGPUB-DOCUMENT-NUMBER: 20030065505
DOCUMENT-IDENTIFIER: US 20030065505 A1

TITLE: Systems and methods for abstracting portions of information that is
represented with finite-state devices
PUBLICATION-DATE: April 3, 2003

US-CL-CURRENT: 704/9
INT-CL: [07] G06 F 17/27

L7: Entry 2 of 19

File: PGPB

Mar 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030046087
DOCUMENT-IDENTIFIER: US 20030046087 A1

TITLE: Systems and methods for classifying and representing gestural inputs
PUBLICATION-DATE: March 6, 2003

US-CL-CURRENT: 704/275
INT-CL: [07] G10 L 21/00

L7: Entry 3 of 19

File: PGPB

Nov 1, 2001

PGPUB-DOCUMENT-NUMBER: 20010037201
DOCUMENT-IDENTIFIER: US 20010037201 A1

TITLE: Speech recognition accuracy in a multimodal input system
PUBLICATION-DATE: November 1, 2001

US-CL-CURRENT: 704/258
INT-CL: [07] G10 L 13/00

L7: Entry 4 of 19

File: USPT

Mar 15, 2005

US-PAT-NO: 6868383
DOCUMENT-IDENTIFIER: US 6868383 B1

TITLE: Systems and methods for extracting meaning from multimodal inputs using
finite-state devices

DATE-ISSUED: March 15, 2005

US-CL-CURRENT: 704/254; 704/251, 715/863INT-CL: [07] G10L01508, G10L01524

L7: Entry 5 of 19

File: USPT

Nov 23, 2004

US-PAT-NO: 6823308

DOCUMENT-IDENTIFIER: US 6823308 B2

TITLE: Speech recognition accuracy in a multimodal input system

DATE-ISSUED: November 23, 2004

US-CL-CURRENT: 704/256; 704/236, 704/239, 704/255INT-CL: [07] G10 L 15/14, G10 L 15/08, G10 L 15/28

L7: Entry 6 of 19

File: USPT

May 11, 2004

US-PAT-NO: 6735566

DOCUMENT-IDENTIFIER: US 6735566 B1

TITLE: Generating realistic facial animation from speech

DATE-ISSUED: May 11, 2004

US-CL-CURRENT: 704/256; 345/473, 704/270INT-CL: [07] G10 L 15/14, G10 L 21/00, G06 T 15/70

L7: Entry 7 of 19

File: USPT

Apr 20, 2004

US-PAT-NO: 6725199

DOCUMENT-IDENTIFIER: US 6725199 B2

TITLE: Speech synthesis apparatus and selection method

DATE-ISSUED: April 20, 2004

US-CL-CURRENT: 704/258; 704/260, 704/270.1INT-CL: [07] G10 L 13/00

L7: Entry 8 of 19

File: USPT

Jan 20, 2004

US-PAT-NO: 6681206

DOCUMENT-IDENTIFIER: US 6681206 B1

TITLE: Method for generating morphemes

DATE-ISSUED: January 20, 2004

US-CL-CURRENT: 704/243; 704/245, 704/257INT-CL: [07] G10 L 15/06

L7: Entry 9 of 19

File: USPT

Dec 16, 2003

US-PAT-NO: 6665640
DOCUMENT-IDENTIFIER: US 6665640 B1

TITLE: Interactive speech based learning/training system formulating search queries based on natural language parsing of recognized user queries

DATE-ISSUED: December 16, 2003

US-CL-CURRENT: 704/257; 704/270.1, 704/275, 707/4

INT-CL: [07] G10 L 15/18, G10 L 15/22, G06 F 17/30

L7: Entry 10 of 19

File: USPT

Jul 14, 1998

US-PAT-NO: 5781179
DOCUMENT-IDENTIFIER: US 5781179 A

TITLE: Multimodal information inputting method and apparatus for embodying the same

DATE-ISSUED: July 14, 1998

US-CL-CURRENT: 345/157; 704/251

INT-CL: [06] G09 G 5/08

L7: Entry 11 of 19

File: DWPI

Mar 15, 2005

DERWENT-ACC-NO: 2005-281798
ABSTRACTED-PUB-NO: US 6868383B
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TITLE: Multimodal recognition system for speech input to personal digital assistant, generates recognition model for other mode recognition systems with recognition results from one mode recognition system

INT-CL (IPC): G10 L 15/08, G10 L 15/24

Derwent-CL (DC): P86, T01 , T04 , W04

EPI Codes: T01-C08A; T01-J10B2; T04-D07D; W04-V04A;

L7: Entry 12 of 19

File: DWPI

Jan 20, 2004

DERWENT-ACC-NO: 2004-200431
ABSTRACTED-PUB-NO: US 6681206B
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TITLE: Acoustic morphemes generating method for use in spoken dialog system, involves clustering salient phone-phrases into acoustic morphemes based on semantic and syntactic similarities

INT-CL (IPC): G10 L 15/06

Derwent-CL (DC): P86, T01 , U21 , W01 , W04

EPI Codes: T01-F06; T01-J18; U21-C01E; W01-C02B9; W04-V01;

L7: Entry 13 of 19

File: DWPI

Dec 16, 2003

DERWENT-ACC-NO: 2004-058591
ABSTRACTED-PUB-NO: US 6665640B
COPYRIGHT 2005 DERWENT INFORMATION LTD

TITLE: Speech based interactive learning system for e-learning, processes recognized speech utterance data to form sentence data which is converted into speech query for identifying topic answer entry corresponding to speech query

INT-CL (IPC): G06 F 17/30, G10 L 15/18, G10 L 15/22
Derwent-CL (DC): P86, T01 , W04
EPI Codes: T01-J30A; T01-N01D1; W04-V04A; W04-W05A;

L7: Entry 14 of 19

File: DWPI

Apr 3, 2003

DERWENT-ACC-NO: 2003-708376
ABSTRACTED-PUB-NO: US20030065505A
COPYRIGHT 2005 DERWENT INFORMATION LTD

TITLE: Abstraction method for finite-state device, involves abstracting certain aspects of gestural content and taking projection from resulting finite state machine after multimodal integration

INT-CL (IPC): G06 F 17/27
Derwent-CL (DC): T01
EPI Codes: T01-J11A1; T01-J17;

L7: Entry 15 of 19

File: DWPI

Mar 6, 2003

DERWENT-ACC-NO: 2003-439455
ABSTRACTED-PUB-NO: US20030046087A
COPYRIGHT 2005 DERWENT INFORMATION LTD

TITLE: Gesture representation method for wireless portable computing devices, involves providing recognized possible meaning lattice, based on gesture recognition lattice and recognized possible words sequences lattice

INT-CL (IPC): G10 L 21/00
Derwent-CL (DC): P86, T01 , T04 , W04
EPI Codes: T01-J10B2; T01-J11A1; T01-J18; T01-M06A1A; T04-D03; T04-D04; W04-V01; W04-V04A; W04-V05;

L7: Entry 16 of 19

File: DWPI

Apr 20, 2004

DERWENT-ACC-NO: 2003-183511
ABSTRACTED-PUB-NO: US20020184027A
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TITLE: Speech synthesis apparatus for use as voice browser, assesses quality of speech form utterances to select speech synthesis engines with different characteristics

INT-CL (IPC): G10 L 13/00, G10 L 13/04
Derwent-CL (DC): P86, T01 , W04
EPI Codes: T01-J18; T01-N03A1; W04-V04C;

L7: Entry 17 of 19

File: DWPI

Nov 23, 2004

DERWENT-ACC-NO: 2002-218521
ABSTRACTED-PUB-NO: EP 1126436A
COPYRIGHT 2005 DERWENT INFORMATION LTD

TITLE: Speech recognition method for complementary multimodal input system involves recognizing words by comparing identified features of speech and modal input data based on models for speech and event recognition

INT-CL (IPC): G06 F 3/16, G10 L 13/00, G10 L 15/08, G10 L 15/14, G10 L 15/18, G10 L 15/24, G10 L 15/28

Derwent-CL (DC): P86, T01 , W04

EPI Codes: T01-C08A; T01-E01C; T01-J05B4P; T01-J18; W04-V01; W04-V04C;

L7: Entry 18 of 19

File: DWPI

Mar 30, 2005

DERWENT-ACC-NO: 2000-259225
ABSTRACTED-PUB-NO: EP 992933A
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TITLE: Generating realistic facial animation directly from speech, analyses voice with regard to learned categories of facial gesture and trains hidden Markov models to obtain optimal representation for new vocal actions

INT-CL (IPC): G06 K 9/00, G06 K 9/68, G06 T 13/00, G06 T 15/70, G10 L 15/00, G10 L 15/14, G10 L 21/00

Derwent-CL (DC): P86, T01

EPI Codes: T01-C08A; T01-J10C4; T01-J10C5; T01-J18;

L7: Entry 19 of 19

File: DWPI

Mar 28, 1997

DERWENT-ACC-NO: 1997-250041
ABSTRACTED-PUB-NO: JP 09081364A
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TITLE: Multimodal information input method for electronic computer - involves directing object displayed on monitor of computer using voice command converted into internal computer command by application program

INT-CL (IPC): G06 F 3/033, G06 F 3/16, G09 G 5/08, G10 L 3/00

Derwent-CL (DC): P85, P86 , T01 , W04

EPI Codes: T01-C10; T01-J18; W04-V04;

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